



Series III

Air Motor Installation and Operating Instructions

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FORM

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⚠ DANGER

Indicates a hazard which, if not avoided, will result in serious injury or death.

⚠ CAUTION

Indicates a hazard which, if not avoided, could result in minor or moderate personal injury.

⚠ WARNING

Indicates a hazard which, if not avoided, could result in serious injury or death.

NOTICE

Indicates information considered important, but not hazard-related (e.g. messages relating to property damage).

GENERAL SAFETY INSTRUCTIONS

⚠ WARNING

- Read and follow all instructions carefully.
- Disconnect and lock out power before installation and maintenance. Working on or near energized equipment can result in severe injury.
- Do not operate equipment without guards in place. Exposed equipment can result in severe injury or death.
- Read and understand the information in this section and in this manual completely before installing, operating or maintaining this equipment. Failure to follow this instruction could result in severe injury or death.

⚠ CAUTION

- Perform periodic inspections. Equipment may fail prematurely and could become unsafe if not properly inspected and maintained. Failure to follow this instruction could result in mild or moderate personal injury.

Air Motor Installation and Operating Instructions

Operating Recommendations

1. Huco Air Motors are designed and built to be safe and reliable when properly used. Advice and approval should be sought from authorized Huco Dynatork personnel before any of our products are used in circumstances other than recommended herein.
2. Compressed air is the only medium to be used.
3. Air pressure should not exceed 6.9 bar (100 lb./in²)
4. Motors requiring lubrication must have a lubricator fitted to the air supply. Recommended lubricants are shown opposite.
5. Each motor should be supplied with air that is adequately filtered to remove fluids and particles above 40 microns.
6. An operating temperature range of -10°C to +80°C (14°F to 176°F) is recommended.
7. Motors should be sited and mounted to avoid excessive vibration.
8. Safety or system integrity should not depend upon the assumption that leakages cannot or will not occur.
9. Actual response times for air motors can vary according to ambient conditions and service life.
10. Adequate regular maintenance is essential to ensure continuous satisfactory and safe performance.

Installation

1. Huco Air Motors are precision machines and are susceptible to damage by dirt particles. Cleanliness is essential during installation and servicing.
2. To prevent ingress of dirt or grit do not remove the red protective caps (Item 8) from the ports until installed.
3. When the motor has been mounted and the shaft connected, air supply tubes should be fitted to the ports ensuring that no dirt or grit can enter the ports.

Commissioning

1. Set air pressure to zero.
2. Set any speed restrictor valves to the fully open position
3. Slowly increase air pressure until the shaft rotates under load.
4. For low load applications, increase air pressure by a further 1 – 1.25 bar (15 – 20 lb./in²). This may not be necessary for high load applications.
5. Adjust the speed restrictor to give the required speed.
6. The air motor will now be running at the optimum and most efficient setting.

NOTICE: *It is bad practice to apply excessive line air pressure and then have a tight restriction on the exhaust port. This can cause excessive wear on the base of the pistons.*

Recommended Lubricants

The following lubricants are in accordance with ISO 3448

- BP Energol HL32 (ISO)
- Caltex Rando HD32
- Esso Nuto H32
- Gulf Harmony 32
- Mobil DTE light oil
- Shell Tellus 37

Recommended Lubricants

- Shell Alvania RL3 (Aluminum Motor Standard)
- Rocol Foodlube (Acetal Motor Standard)

Maintenance Procedures

Huco Air Motors are precision engineered and are designed for a long working life. The wearing parts are the pistons, cylinder liners and seals, which can be replaced as part of a routine maintenance schedule.

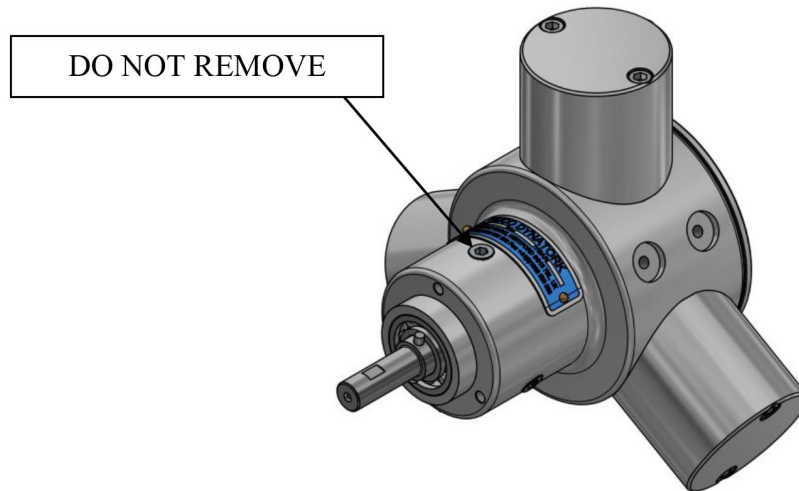
For this purpose, spare parts kits can be purchased from Huco Dynatork or our authorized distributors, comprising three pistons, three liners, three piston seals and three O Rings.

The drive shaft and rotary valve assembly are matched during manufacture and should not be removed from the motor body. If in the event that they are removed they will require replacement with new parts in our factory.

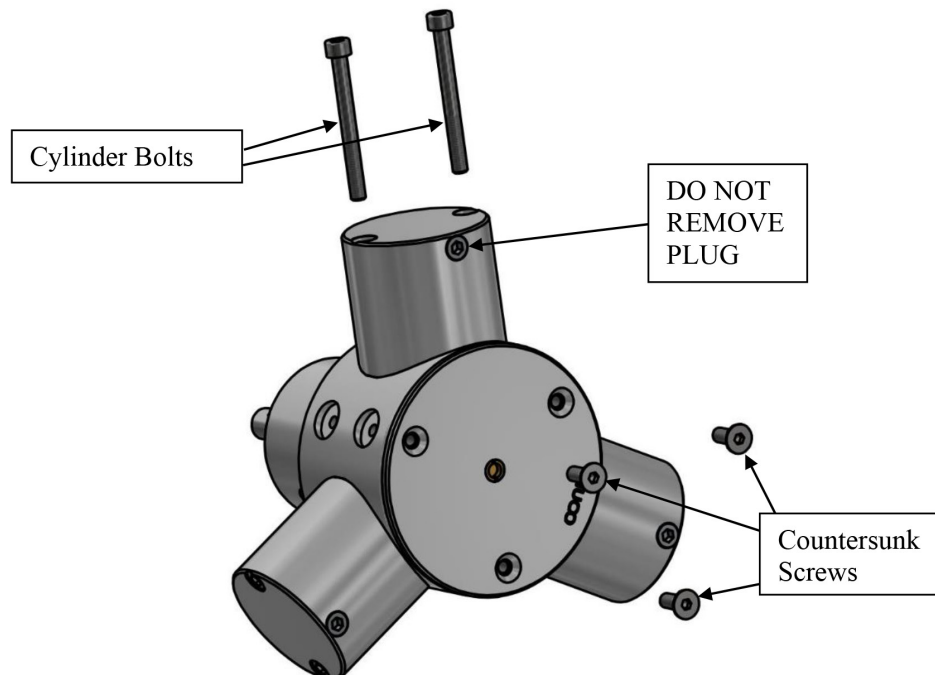
As with all precision engineered machines, cleanliness is essential during dismantling and assembly. Before dismantling, the air supply ports must be covered with plastic caps and the workbench should be clean and free of debris

Dismantling

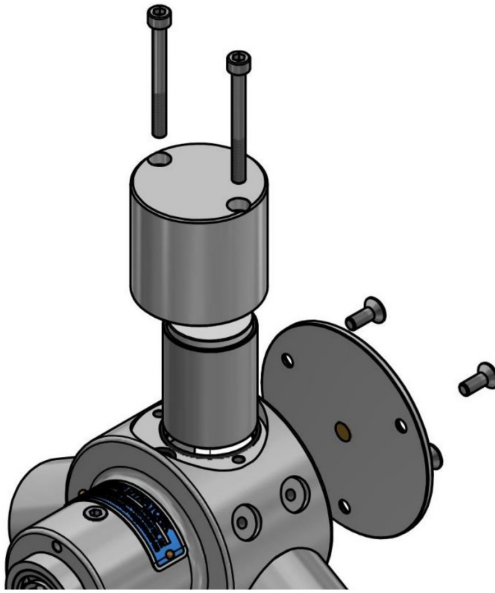
1. Ensure that all the airlines are disconnected from the motor.



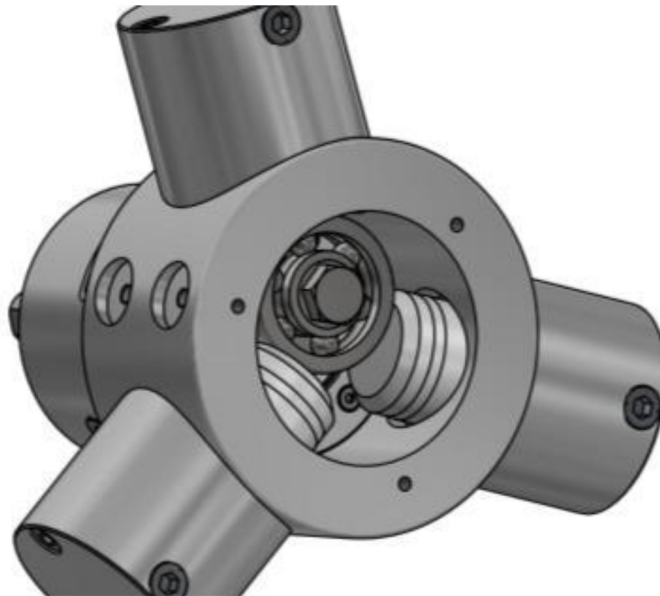
2. Remove the three countersunk screws holding the rear cover to expose the crank area. Remove the three-cylinders by withdrawing the two bolts on each.



3. The three exposed ports of the air flow route (2 on each cylinder and 3 on the body) must be protected to prevent any ingress of dirt/grit. This is critical.
4. Remove the three piston/liner assemblies from the cylinders with the seals and the O Rings.



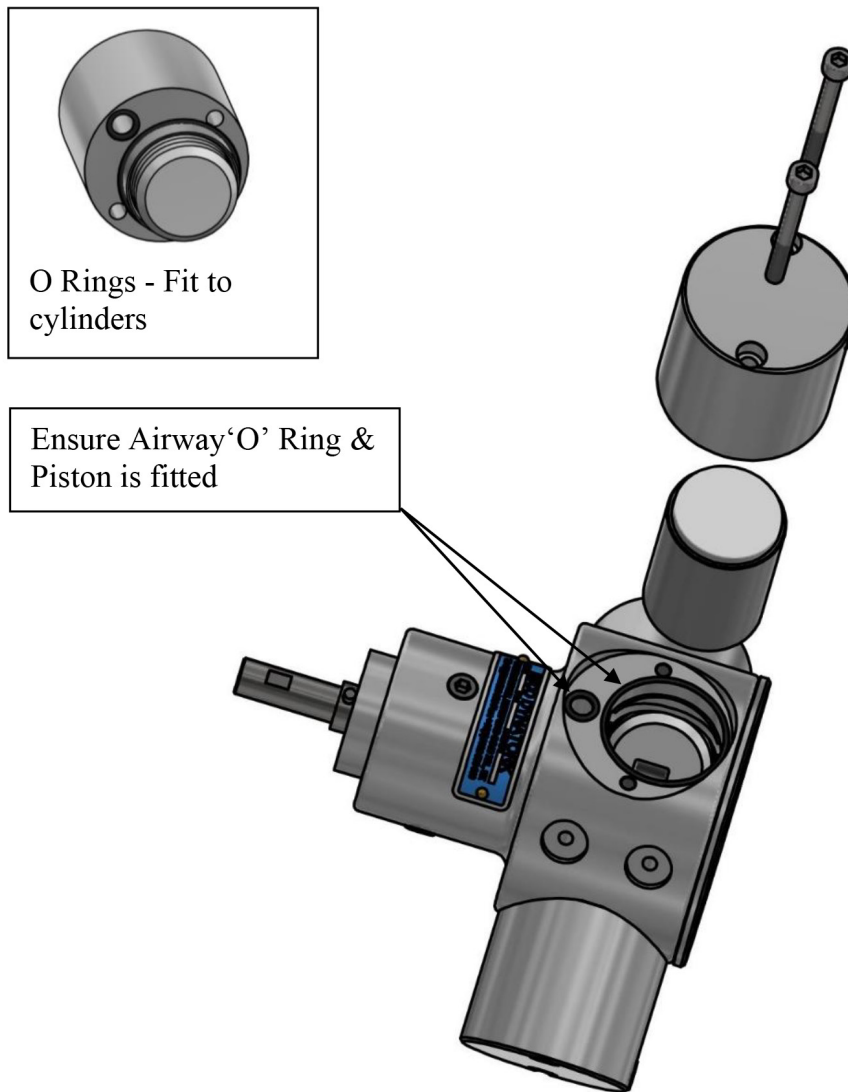
5. Clean the crank area and cylinder bores using a suitable solvent to ensure it is free from dirt particles.



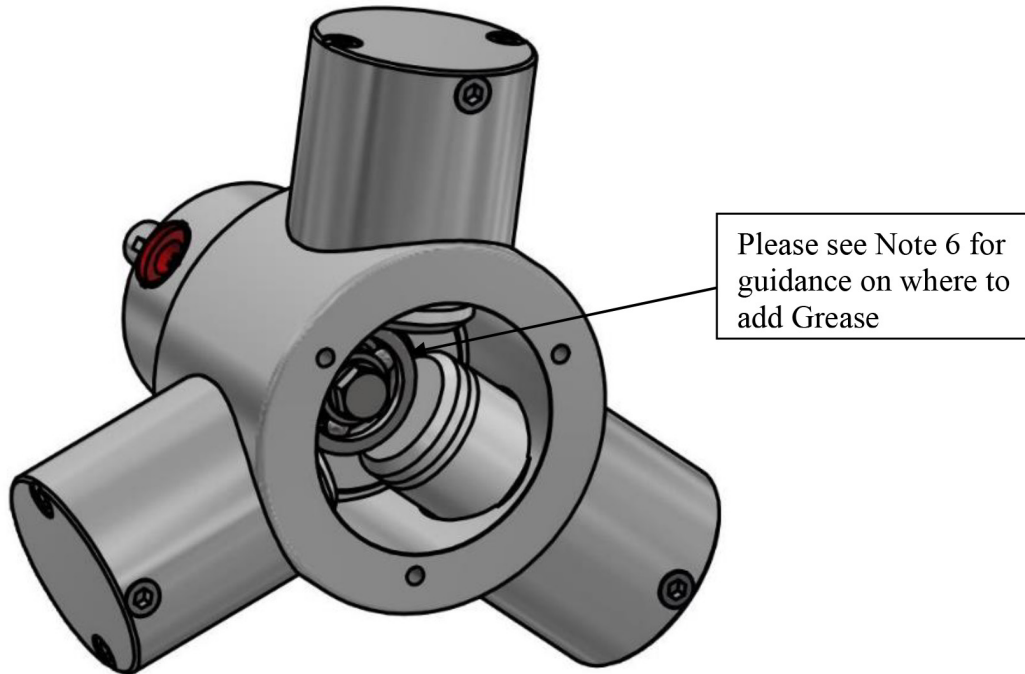
NOTICE: Shaft and bushings are assembled as a unit and should not be removed. If you find the shaft will not rotate freely, we recommend you contact Huco prior to any further work.

Reassembly

1. Ensure all parts are clean and grit free
2. Insert replacement piston/liner/seal assemblies ensuring that the seal is at the cylinder end
3. Fit the O Ring in the groove on cylinder depending on the type.
4. Apply a small amount of oil onto each piston

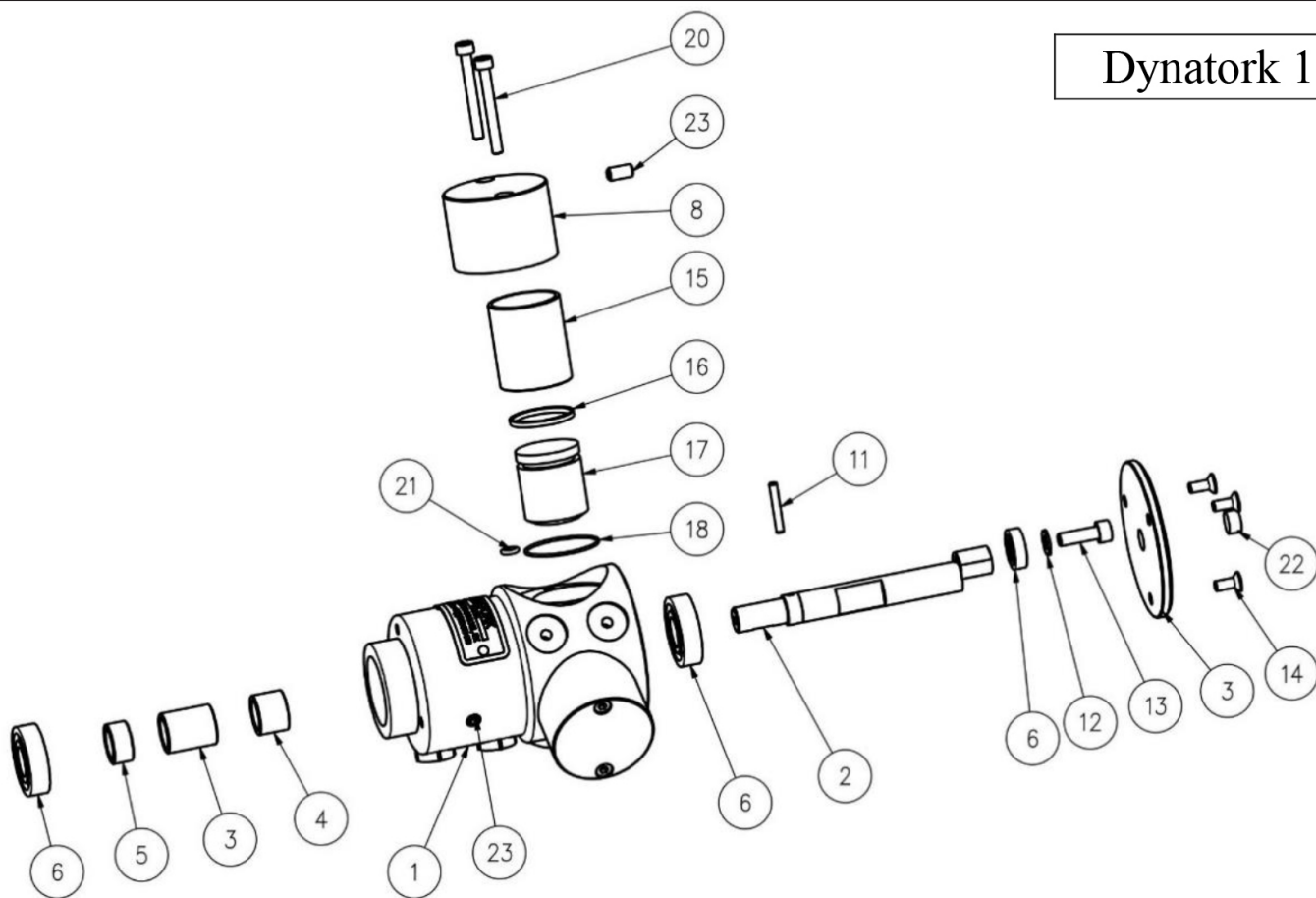


5. Locate the three-cylinders onto the motor body, secure in place using the two bolts. The bolts should be tightened evenly to ensure no leakage of air, also do not apply excessive force as this may strip the threads

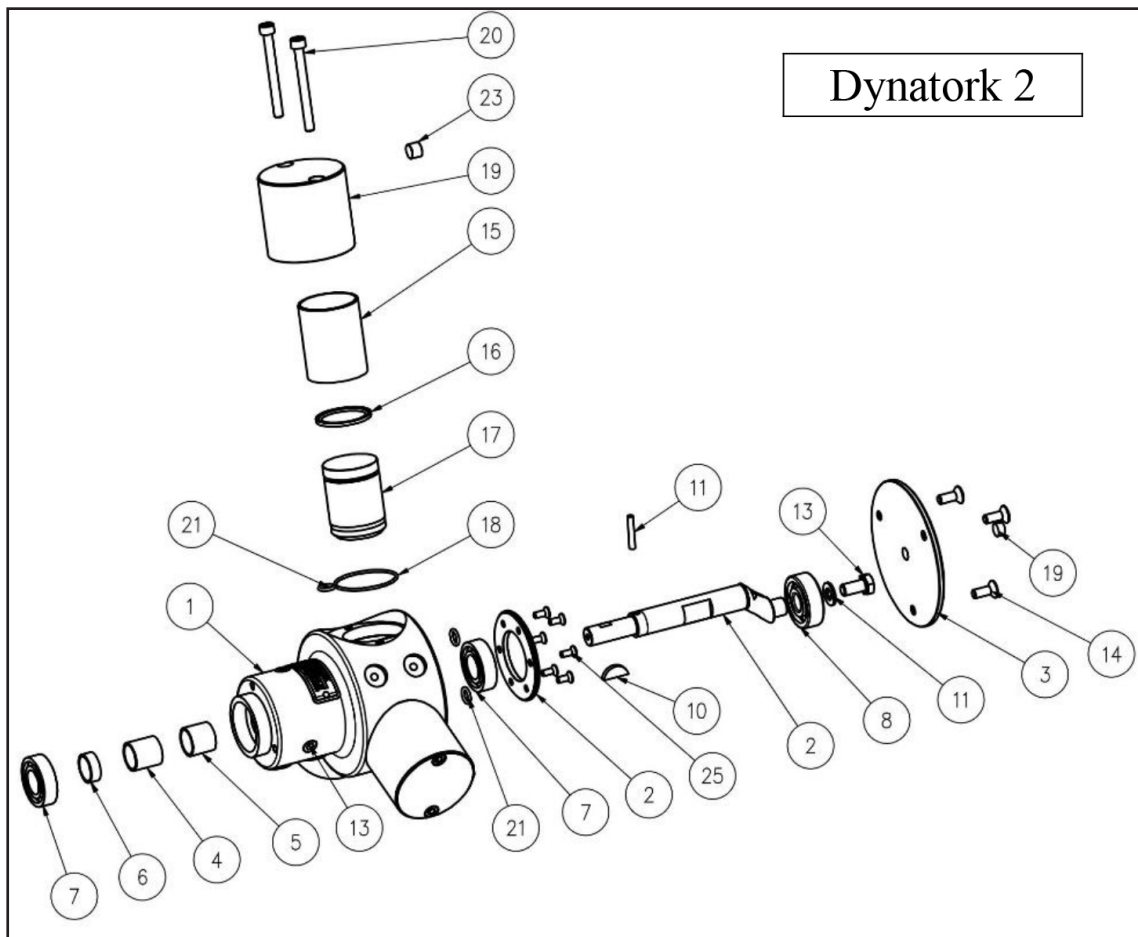


6. Apply a small amount of grease to the crank bearing. Piston kits are supplied greased. Do not fill the crankcase with grease, as this impairs operation. New motors are supplied greased with approximately 16 grams.
7. Re-connect the air supply, making sure the pressure is at zero.
8. Slowly increase the air pressure to approx. 1 – 1.25 bar (15-20 lb./in) the motor should start to rotate slowly.
9. Disconnect air supply and replace rear cover

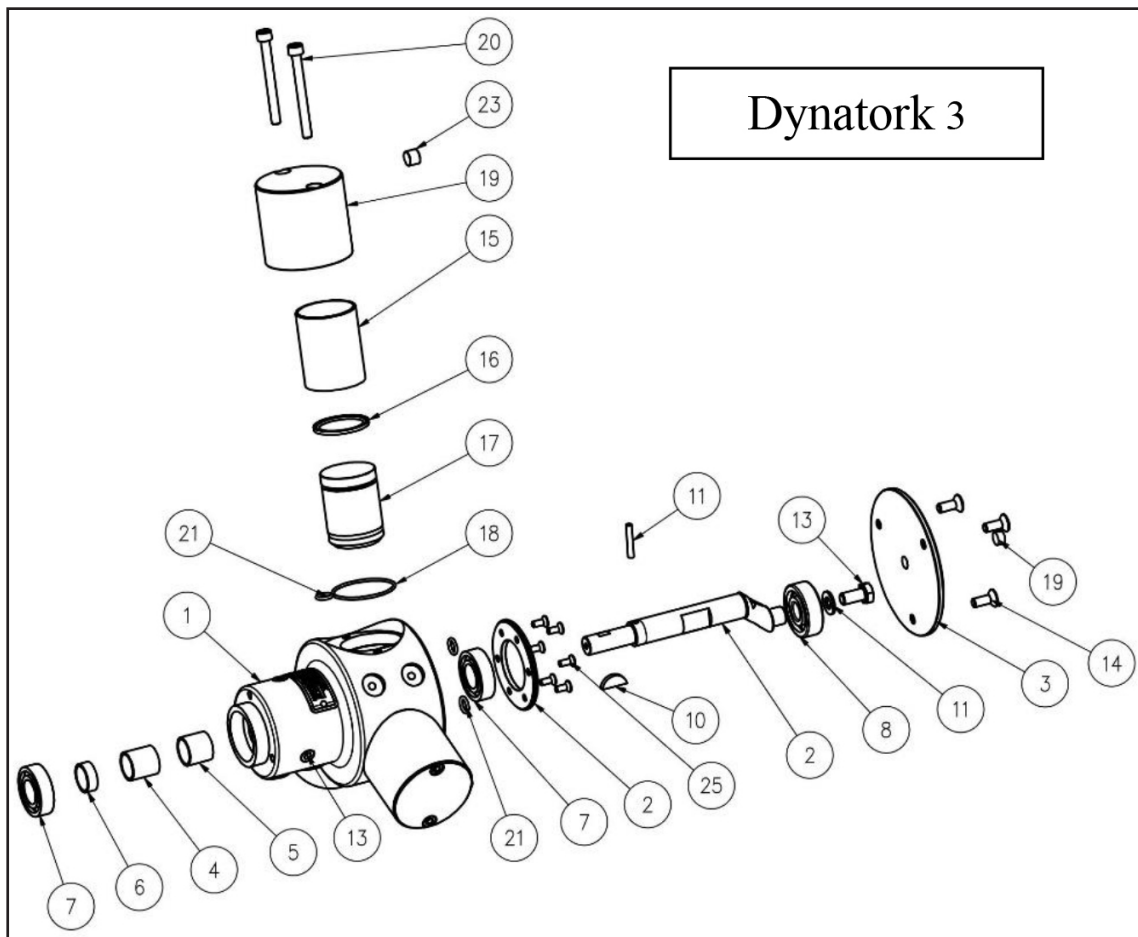
Dynatork 1



Item No.	Description	Dynatork 1 970.15.A
1	Body	L130101
2	Drive Shaft	L100201
3	Cover	L130301
4	oilite Bush	L102100
5	oilite Bush	L102101
6	oilite Bush	L102102
7	Ball Bearing	L102000
8	Ball Bearing	L102001
9	Dust Cap	L102300
10	Key	N/A
11	Pin	L102500
12	Washer	PWS.M050
13	Screw	SCS.M050.160
14	Screw	SSK.M040.100
15	Piston Liner	L133600
16	Piston Seal	L132601
17	Piston	L103500
18	O Ring Seal	L132701
19	Cylinder	L131300
20	Screw	SCS.M040.350
21	O Ring Seal	L132702
22	Vent Air Silencer	L102400
23	Plug	SSS.M050.050
24	Seal	N/A
25	Seal Ring Screws	N/A

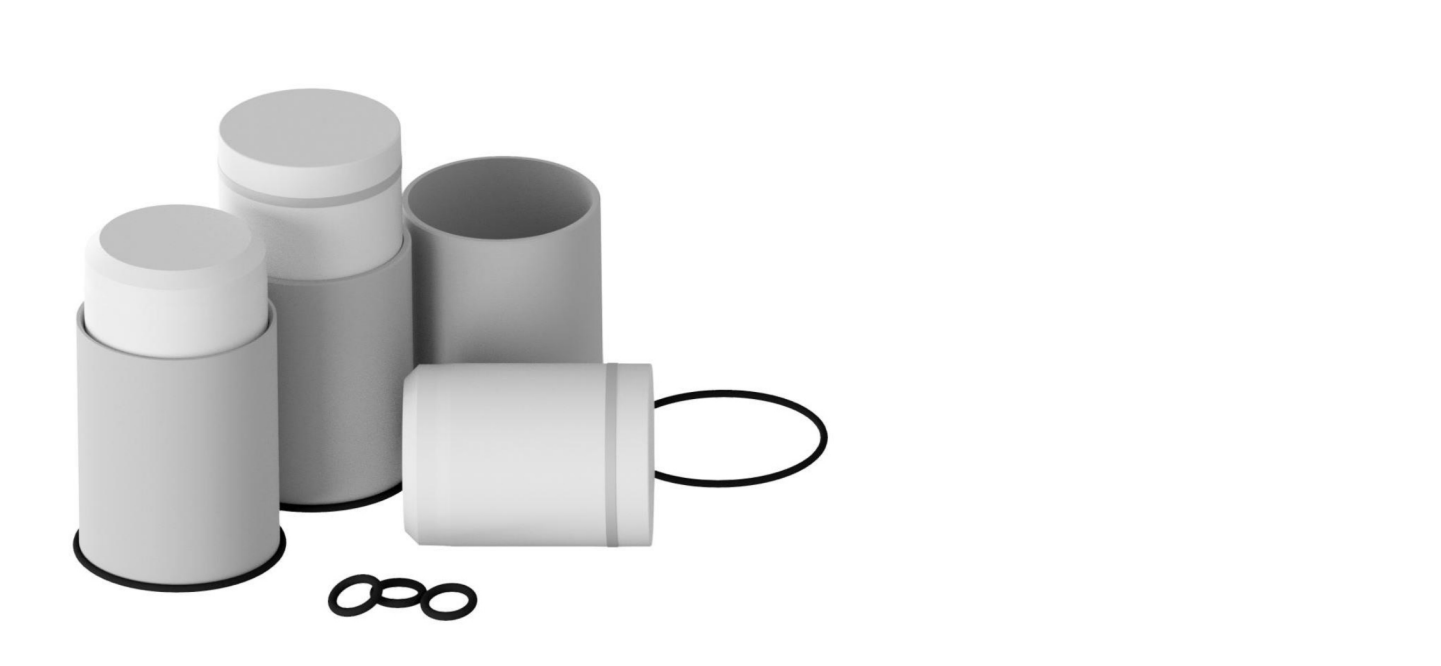


Item	Description	Dynatork 2			
		970.25.A	970.25.AM	980.25.A	980.25.AM
1	Body	L230101	L230101	L234101	L234101
2	Drive Shaft	L230202	L230214	L230202	L230214
3	Cover	L230301	L230301	L234301	L234301
4	Oilite Bush	L202100	L202100	L202100	L202100
5	Oilite Bush	L302100	L302100	L302100	L302100
6	Oilite Bush	N/A	N/A	N/A	N/A
7	Ball Bearing	L202000	L202000	L202000	L202000
8	Ball Bearing	L302001	L302001	L302001	L302001
9	Dust Cap	L302300	L302300	L302300	L302300
10	Key	N/A	364.0505.015	N/A	369.0505.015
11	Pin	L302500	L302500	L302500	L302500
12	Washer	PWS.M080	PWS.M080	PWS.M080	PWS.M080
13	Screw	SSH.M080.160	SSH.M080.160	SSH.M080.160	SSH.M080.160
14	Screw	SSK.M030.080	SSK.M030.080	SSK.M030.080	SSK.M030.080
15	Piston Liner	L233600	L233600	L233600	L233600
16	Piston Seal	L202601	L202601	L202601	L202601
17	Piston	L233500	L233500	L233500	L233500
18	O Ring Seal	L202701	L202701	L202701	L202701
19	Cylinder	L231300	L231300	L234000	L234000
20	Screw	SCS.M050.500	SCS.M050.500	SCS.M050.500	SCS.M050.500
21	O Ring Seal	L302702	L302702	L302702	L302702
22	Vent Air Silencer	L102400	L102400	L102400	L102400
23	Plug	L322500	L322500	L322500	L322500
24	Seal Ring	L231800	L231800	L234700	L234700
25	Seal Ring Screws	SSK.M030.080	SSK.M030.080	SSK.M030.080	SSK.M030.080



Item	Description	Dynatork 3			
		970.35.A	970.35.AM	980.35.A	980.35.AM
1	Body	L340102	L340102	L344101	L344101
2	Drive Shaft	L340205	L340214	L340205	L340214
3	Cover	L340301	L340301	L344301	L344301
4	oilite Bush	L302102	L302102	L302102	L302102
5	oilite Bush	L302106	L302106	L302106	L302106
6	oilite Bush	L302107	L302107	L302107	L302107
7	Ball Bearing	L302005	L302005	L302005	L302005
8	Ball Bearing	L302001	L302001	L302001	L302001
9	Dust Cap	L302300	L302300	L302300	L302300
10	Key	L302800	364.0505.025	L302800	369.0505.025
11	Pin	L302500	L302500	L302500	L302500
12	Washer	PWS.M080	PWS.M080	PWS.M080	PWS.M080
13	Screw	SSH.M080.160	SSH.M080.160	SSH.M080.160	SSH.M080.160
14	Screw	SSK.M060.150	SSK.M060.150	SSK.M060.150	SSK.M060.150
15	Piston Liner	L343600	L343600	L343600	L343600
16	Piston Seal	L302601	L302601	L302601	L302601
17	Piston	L343500	L343500	L343500	L343500
18	O Ring Seal	L302701	L302701	L302701	L302701
19	Cylinder	L341300	L341300	L344000	L344000
20	Screw	SCS.M060.600	SCS.M060.600	SCS.M060.600	SCS.M060.600
21	O Ring Seal	L302702	L302702	L302702	L302702
22	Vent Air Silencer	L102400	L102400	L102400	L102400
23	Plug	L322500	L322500	L322500	L322500
24	Seal Ring	L341800	L341800	L344700	L344700
25	Seal Ring Screws	SSK.M040.100	SSK.M040.100	SSK.M040.100	SSK.M040.100

Service Kits



Piston service kits are available. The table below shows the sales code detailing the contents of each kit. Note piston kits contain three pistons, liners, seals, and o rings.

Component	Dynatork 1	Dynatork 2	Dynatork 3
Sales Code	959.15	959.25	959.35
Piston	L103500	L233500	L303500
Piston Liner	L133600	L233600	L343600
Piston Seal	L102601	L202601	L302601
O Ring Seal	L132701	L202701	L302701
Airway O Ring	L122702	L302702	L302702

The proper selection and application of products and components, including assuring that the product is safe for its intended use, are the responsibility of the customer. To view our Application Considerations, please visit <https://www.regalrexnord.com/Application-Considerations>.
To view our Standard Terms and Conditions of Sale, please visit <https://www.regalrexnord.com/Terms-and-Conditions-of-Sale>.